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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,343	09/08/2003	John Chen	P/144-321	1656

7590 06/22/2006

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EXAMINER

FIGUEROA, FELIX O

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,343

Applicant(s)

CHEN ET AL.

Examiner

Felix O. Figueroa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-9, 12-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-9 and 12-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The indicated allowability of claims 3 and 12 is withdrawn in view of the newly discovered reference(s) to Kunz (6,171,152). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6 and 8/3-8/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (US 6,132,260) in view of the prior art Figures 1-3 of Yamamoto et al. (US 5,865,934) and Kunz (US 6,171,152).

Wu discloses a multi-port connector comprising: a housing (2) having at least two aligned compartments (210,212) to receive respective plugs; a printed wiring board (7) separating the two compartments and having circuit patterns (70) on opposite sides; a first plurality of conductive contact fingers (4 top) in one of the compartments and having first and second portions (41,42); a second plurality of conductive contact finger (4 bottom) in another of the compartments and having first and second portions. Wu discloses an assembly housing (5) in one of the compartments. Please note that the recitation of the intended use (i.e. for housing two sets of toroids) of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the

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prior art structure is capable of performing the intended use, then it meets the claim.

See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Wu discloses substantially the claimed invention except for the multiple layers on the printer wiring board. Yamamoto (in prior art Figs. 1-3) teaches a multiplayer printed wiring board having circuit patterns (23) on opposite sides of opposed non-conductive layers (22) and a metal shielding layer intermediate the non-conductive layers to provide structural strength and heat dissipation (col.9, lines 59-61). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the printed wiring board of Wu as a multiplayer printed wiring board having circuit patterns on opposite sides of opposed non-conductive layers and a metal shielding layer intermediate the non-conductive layers, as taught by the prior art of Yamamoto, to provide structural strength and heat dissipation.

Wu, as modified, discloses substantially the claimed invention except for the metal separator. Kunz teaches the use of a metal separator (74) for separating sets of toroids in order to reduce electromagnetic interference caused by one set to the other. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a metal separator, as taught by Kunz, to reduce electromagnetic interference.

Regarding claim 4, Wu, as modified, discloses the toroid base assembly has a first set of contacts for connecting the two sets of toroids to the circuit patterns on the

printed wiring board and a second set of contacts for connecting the two sets of toroids to an external circuit.

Regarding claim 5, Wu discloses the first portions of the contact fingers having spacing equal to the spacing between the contacts in the corresponding plug.

Regarding claim 6, Wu discloses the second portions spaced apart by a distances greater than the spacing of the first portions (Fig.3).

Regarding claims 8/3-8/6, Wu discloses the compartments being upper and lower vertically aligned compartments.

Claims 7 and 8/7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, Yamamoto and Kunz, and further in view of Laity (US 6,183,308).

Wu, as modified by Yamamoto, discloses substantially the claimed invention except for resilient spring action of the contact finger. Laity teaches a connector having contact fingers (354) with resilient second portions (358) being connected to traces on a circuit board by spring action to provide a resilient and secure connection (thus efficient). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Wu having contact fingers with resilient second portions being connected to traces on a circuit board by spring action, as taught by Laity, to provide a resilient and secure connection.

Claims 9/8/3-9/8/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, Yamamoto and Kunz, and further in view of Goodall et al. (US 5,531,612).

Wu, as modified, discloses substantially the claimed invention except for the metallic shields. Goodall teaches the use of front and rear metallic shields to protect the

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connector from external electromagnetic interference. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the connector of Wu having front and rear metallic shields, as taught by Goodall, to protect the connector from external electromagnetic interference.

Claims 9/8/7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, Yamamoto, Kunz and Laity, and further in view of Goodall et al.

See previous discussion on claims 9/8/3-9/8/6.

Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, Yamamoto and Kunz, and further in view of Goodall et al.

Wu, as modified (see discussion on claim 3), discloses substantially the claimed invention except for the plurality of sets of upper and lower vertically aligned compartments. Goodall teaches a plurality of sets of upper and lower vertically aligned compartments to maximize space. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to duplicate the connector of Wu to have a plurality of sets of upper and lower vertically aligned compartments, as taught by Goodall, to maximize space.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, Yamamoto, Kunz and Goodall, and further in view of Laity.


See previous discussion on claim 7.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix O. Figueroa whose telephone number is (571) 272-2003. The examiner can normally be reached on Mon.-Fri., 10:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 Ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Felix O. Figueroa
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